Curriculum vitae
Mikhail Auguston

Address:

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Citizenship: USA citizen

Education and degrees:

1992: Doctor in Computer Science Diploma from Latvia University habilitation and promotion council
1990: Senior Research Fellow Diploma from Highest Evaluation Commission of USSR Council of Ministers
1983: Candidate of Sciences Degree (equivalent of PhD) from Institute of Cybernetics in Kiev (USSR) for dissertation on "Programming and Verification of Sequential Files Processing Programs." Advisor: Prof. J.Barzdin
1971: MS in Mathematics summa cum laude from Latvia University. Title of Diploma Thesis: "Asimptotically Optimal Enumerations"

Professional experience:

2003 – present: Associate Professor of Computer Science, Naval Postgraduate School, Monterey, CA, USA
1993-2002: Associate Professor of Computer Science, New Mexico State University, Las Cruces, NM, USA
1992-1993: Visiting Associate Professor of Computer Science, New Mexico State University, Las Cruces, NM, USA
Spring 1992: Visiting Researcher at Programming Environments Laboratory of Linkoping University, Sweden
1983-1992: Leading Researcher at Institute of Mathematics and Computer Science at Latvia University
1977-1978: Visiting Researcher at Warsaw University, Poland
1971-1983: Research Scientist at Computing Center of Latvia University

Summary of qualifications, experience, and current research:

My research interests are mainly in programming language design and implementation, program testing and debugging tool design, and visual programming languages. My academic work involves teaching and research in software engineering and programming languages. I have more than 30 years of experience in this particular field.

I studied mathematics at Latvia University from 1967-1971 and received an MS Diploma summa cum laude in 1971. In 1971 I joined the Computing Center of Latvia University as a Research Scientist and participated in numerous projects conducted there, in particular:

- the design and implementation of COBOL-like language for file processing on second generation Soviet-made computers Minsk-22 and Minsk-32,
- the interpreter for PL/1 program testing for IBM/360 clones,
- the testing environment for assembly level language for PDP-11 computers,
- the implementation of specification language SDL for communication system software rapid prototyping and testing,
- the tool system GRAPES/4GL for information systems design.

I also coauthored the most popular textbook on PL/1 in the Soviet Union (two editions in Moscow in 1979 and 1984, and in Warsaw, Poland, in 1988, totaling over 100,000 copies sold).

The LEM language for file processing.

In 1976-77 I single-handedly designed and implemented the file processing language LEM as a preprocessor for PL/1. The novelty of the language was in the hierarchy of notions pertaining to file, subfile, and record type to describe the data, control structures based on regular expressions to specify subfiles, and a special loop structure to arrange a synchronous access to several sorted input files. In brief, it was a successful integration of RPG ideas into the powerful PL/1 environment. This work was presented at various conferences in the Soviet Union, a paper describing my accomplishment was published in "Programmirovanije" (Programming) the most prestigious journal of the Soviet Academy of Sciences in the field of Software Engineering. An English translation of this paper appeared in 1978 in "Programming and Computer Software (USA)", published by Plenum Publishing Corporation. The LEM language has been used at several industrial information processing sites in Soviet Union, including the main financial office of the Soviet Army.

The LEM project provided a basis for my PhD research under the supervision of Professor Janis Barzdin. For my thesis, in addition to the programming tools for file processing, I also developed a specification language for formal annotation of file processing programs, and obtained theoretical results regarding algorithmically decidable cases of file processing program verification. Those results were presented at various conferences in the USSR and published also in Springer's Lecture Notes in Computer Science in 1978. In 1983 I successfully defended my PhD thesis at the Cybernetics Institute in Kiev, which was one of the leading centers in Computer Science research in the USSR, and was promoted to Leading Researcher at the Institute of Mathematics and Computer Science at Latvia University. In 1990 I received a Senior Research Fellow Diploma from the Highest Evaluation Commission of the Ministers Council of the USSR, which was the highest official certificate for a researcher in the USSR.

Compiler construction tool RIGAL.

In 1987-88 I designed and implemented a programming language RIGAL for compiler construction on PDP, VAX, and IBM PC computers. This simple and powerful tool was extensively used for the SDL and GRAPES/4GL projects, and later was successfully applied for programming language rapid prototyping and language processor design in Sweden, Germany, Russia, and the USA. The novelty of this tool is in the introduction of built-in tree data structures and powerful tree pattern matching mechanisms which make it possible to describe parsing, optimization, and code generation algorithms all in the same framework.

Papers on RIGAL were published in "Programmirovanije" (Programming), in ACM "SIGPLAN Notices" and in Springer's Lecture Notes in Computer Science. The RIGAL Web site is maintained at the Linkoping University in Sweden at URL http://www.ida.liu.se/labs/pelab/members/vaden/rigal.html The RIGAL language also appears to be an excellent tool for teaching syntax-oriented methods in compiler construction, and as such is successfully used for teaching undergraduate and graduate compiler construction courses in universities in Latvia and the USA.

FORMAN language for testing and debugging automation.

In the 1990s I started to work on a language for formal annotation of programs, FORMAN. This language is used for dynamic and static analysis of programs, for the automation of testing, and for debugging. Dynamic program analysis is one of the least understood activities in software development. As indicated, for example, in the April, 1997 issue of the "Communications of the Association for Computing Machinery," program debugging is the most difficult and underdeveloped area of software design. Program testing and debugging is still a human activity performed largely without any adequate tools and consuming more than 50% of the total program development time and effort.

My work on debugging automation is based on a concept of assertion language as well as on precise program execution models. Unlike all its predecessors, the FORMAN language is designed for the description of computations over execution histories of target programs, providing a basis for tool development for assertion checking, debugging queries, execution profiles, and performance measurements. Assertion language mechanisms, including event patterns and aggregate operations over event traces, are used to describe typical bugs and debugging rules, and to evaluate debugging queries. I introduced and developed the concept of event grammar, which provides a sound basis for assertion language implementation via automatic instrumentation of the target program. I expect that my work will contribute to the design of the next generation of software development tools and methods that

may be useful for the testing, debugging, documentation, and maintenance of software systems. My approach is nondestructive, since assertion texts are separated from the target program source code and can be maintained independently. Assertions can capture both the essential dynamic properties of a particular target program and can formalize the general knowledge of typical bugs and debugging strategies. During my stay as a Visiting Researcher at Linkoping University, Sweden, in Spring 1992, in collaboration with Dr. Peter Fritzson, the FORMAN approach has been extended to the parallel programming case.

A prototype assertion checker for a subset of PASCAL was designed to demonstrate the feasibility of the approach, and currently we are working on a more advanced system for C program debugging. Results of this research were published in numerous conference proceedings, including the International Workshop on Algorithmic and Automatic Debugging in Saint-Malo, France. Two journal papers present the main results both for sequential and parallel cases.

Visual programming language V.

In 1996 I started a collaborative project with Dr. Daniel Cooke of the University of Texas in El Paso to design a visual interface for the structured information processing language, SequenceL. This work was supported by a UTEP/PACES/NASA grant and has led to the design of an experimental visual programming language V.

The novelty of V can be described as follows. We have suggested a solution for iterative processing in data flow diagrams based on the notion of a conditional data flow switch, and a specialized iterative construct based on pattern matching for vectors and matrices. Iterative control constructs in data flow programming languages have always been a challenging part of language design. The aim of our work is to demonstrate how iterative control constructs typically used for sequence and matrix traversal could be visualized and adapted into a data-flow paradigm. The motivation behind this is to achieve a clear and straightforward correspondence between the program source code (the data flow diagram in this case) and the order of program execution.

The use of a pattern matching mechanism for vectors and matrices eliminates the need for explicit index variables and makes the position of adjacent items within an aggregate visible and easy to understand. It is especially useful in the case of two-dimensional objects (matrices). The V language allows combinations of iteration and recursion. Two-dimensional notation makes it possible to introduce such useful control structure as iteration synchronization. This provides a way to describe operations that involve multiple vectors or matrices. The prototype of the V language has been designed that includes a graphical editor and a simple interpreter. We continue to work on the language implementation. The results of the V project have been presented at various conferences, including the main international forum on visual programming - the IEEE Symposium on Visual Languages VL97, in Capri, Italy, where the V paper has received very good reviews, and at the Workshop on Visual Languages at OOPSLA'2001 in Tampa, Florida.

Miscellaneous projects.

During my stay as a visiting professor at the CS Department of NMSU from 1992-1993, I participated in collaboration with Dr. Juris Reinfelds in the following projects:
- Project to design FrameMaker -> BBN/Slate word processor converter where the RIGAL compiler writing tool was successfully applied.
- The design of an on-line help system for Unix.

Some other projects developed at NMSU in collaboration with Dr. Juris Reinfelds include:
- visual Miranda machine for functional program debugging,
- debugger and assertion checker for awk programming language.

The results of these projects were presented at a number of international conferences.

Since 1996 I have been maintaining the Algorithmic and Automatic Debugging home page at http://www.cs.nmsu.edu/~mikau/aadebug.html , which became a de-facto on-line bulletin for researchers in the field of debugging automation. There are more than 70 subscribers, and the page has received more than 33,000 hits in the recent years. Researchers in the area of debugging automation use references to this www page in their publications.

During my career as a programmer and software designer, I have written tens of thousands lines of code, have designed a number of programming languages and tools, and have written many hundred pages of books, lecture notes, and research papers.

Externally funded projects.

1994: "Development of Second Semester Course in Software Engineering for Real-Time Embedded Systems Using the Ada Programming Language," co-PI Donald Bustamante, Physical Science Laboratory, NMSU, funded by Phillips Laboratory, US Air Force, Contract #F29601-94-K-0036, $42,000.00

1996: "Research in Computer Science - Development of a Visual Programming Language for Structured Information Processing," UTEP/PACES/NASA, grant funded by NASA, Contract PO# 724-6-A2219, $12,000.00

1998-2003: "Management of Dynamic and Irregular Parallelism in Symbolic and Scientific Computing." I am Project Sub-director, NSF CISE Minority Institution Infrastructure Program NSF #9810732, $1,498,343.00

2000-2002: "Engineering Automation for Reliable Software," funded by US Army Research Office, grant number 40473--MA-SP, $1,200,000.00 jointly with Naval Postgraduate School, Monterey, CA, and Stanford University, Palo Alto, CA.

2001: Senior Research Fellowship from the USA National Research Council, Washington, DC, $68,000.00

2001-2004: "A Framework for Seamless Interoperation of Heterogeneous Distributed Software Components," funded by US Office of Naval Research, grant number N00014-01-1-0746, $1,500,000.00 jointly with Indiana University Purdue University Indianapolis and University of Alabama, Birmingham, AL

Invited talks.

2004: University of California Santa Barbara
1999-2001: On multiple occasions, talks at CS Department of Naval Postgraduate School,
      Monterey, CA, USA
2000: Indiana University Purdue University Indianapolis, USA
1997: Bar Ilan University, Tel Aviv University, Technion, Israel
1997: IFIP Work Group 2.4 meeting, Estes Park, CO, USA
1997: SPIN (Software Process Improvement Network) group, SANDIA National Laboratories,
      Albuquerque, NM, USA
1995, 1996: University of Texas, El Paso, TX, USA
1993: IFIP Work Group 2.4 meeting, Monterey, CA, USA
1993: George Washington University, Washington, DC, USA
1992: University of Bergen, Norway
1992: University of Goeteborg, Sweden
1991: University of Linkoping, Sweden
1991: Tel Aviv University, Israel
1991: IFIP Work Group 2.4 meeting, Grassau, Germany
1991: Rostock University, Germany
1991: Moscow University, Russia
1990: IFIP Work Group 2.4 meeting, Kingston, Ontario, Canada

Membership in professional and learned societies.

Association for Computing Machinery (ACM), since 1993
Special Interest Group on Programming Languages (SIGPLAN)
Special Interest Group on Software Engineering (SIGSOFT)
Institute of Electrical and Electronic Engineers (IEEE), since 1993
Computer Society of the IEEE
Technical Council on Software Engineering (TCSE)
Software Engineering Standards Committee

Membership in program committees.

Nordic Workshop on Programming Environment Research, Lund, Sweden, June 1-3, 1994

Nordic Workshop on Programming Environment Research, Aalborg, Denmark, June 1-3, 1996

Nordic Workshop on Programming Environment Research, Bergen, Norway, June, 1998

Nordic Workshop on Programming Environment Research, Lillehammer, Norway, May 28-30, 2000

AADEBUG 2000, Munich, Germany, August 28-30, 2000

12th IEEE International Workshop on Rapid System Prototyping RSP 2001, Monterey, CA, June, 25-27, 2001

Monterey Workshop 2001, Engineering Automation for Software Intensive System Integration, June 18-22, 2001, Monterey, CA

13th IEEE International Workshop on Rapid System Prototyping RSP 2002, Darmstadt, Germany, July 1-3, 2002

Monterey Workshop on Software Engineering, Venice, Italy, October 7-11, 2002

14th IEEE International Workshop on Rapid System Prototyping RSP 2003, San Diego, USA, June 9-11, 2003

AADEBUG 2003, Ghent, Belgium, Sept 8-10, 2003

ACM SAC 2004, Programming Languages track, Cyprus, March 2004

15th IEEE International Workshop on Rapid System Prototyping RSP 2004, Geneva, Switzerland, June 28-30, 2004

Sixth International Baltic Conference on Data Bases and Information Systems (DB&IS'2004)**,** June 6-9, 2004, Riga, Latvia (http://www.riti.lv/dbis2004/)

Local Organization Chair for the 8th International IEEE Enterprise Distributed Object Computing Conference, 20-24 September 2004, Monterey, California, USA (http://www.edocconference.org)

SAC'05 - ACM 2005 SYMPOSIUM ON APPLIED COMPUTING, March 13-17, 2005, Santa Fe, New Mexico, USA, Technical Track on "Programming Languages",
(http://jo.ecs.fullerton.edu/sac/sac2005/)

16th IEEE International Workshop on Rapid System Prototyping RSP 2005, Montreal, Canada, June 2-22, 2005, http://www.rsp-workshop.org/

Local Chair, Member of the Steering Committee and Member of the Program Committee for AADEBUG 2005, SIXTH INTERNATIONAL SYMPOSIUM ON AUTOMATED AND ANALYSIS-DRIVEN DEBUGGING, MONTEREY, CALIFORNIA, SEPTEMBER 19-21, 2005 ,
http://www.cs.nmsu.edu/aadebug/

The Seventeenth International Conference on Software Engineering and Knowledge Engineering
 July 14 to 16, 2005 Taipei, Taiwan, Republic of China http://www.ksi.edu/seke/seke05.html

17th IEEE International Workshop on Rapid System Prototyping RSP 2006, Chania(Crete), June 14-16, 2006, http://www.rsp-workshop.org/

Referee.

Official reviewer for book: A.Pakstas, N.V.Zolotaryov, "Syntax-Oriented Components of Distributed Systems. Development and Debugging Tools on the Base of Formal Descriptions," "Nauka," Moscow, 1992 ("Nauka" Publishing House is the flagman publisher for the Academy of Sciences of USSR, the most reputable publisher of computer science research literature in the former USSR.)

For National Science Foundation, 1994, 1998, 2004

For 6th International Conference on Computing and Information, Peterborough, Ontario, Canada, May 26-28, 1994

For International Symposium on Logic Programming, 1994

For 12th International Conference on Data Engineering, New Orleans, LA, Feb. 26-March 1, 1996,

For 8th International Conference on Software Engineering and Knowledge Engineering, Lake Tahoe, NE, June 10-12, 1996

For Norwegian Research Council, 1996, 1997

For US Army Research Office, 1996, 2000, 2001

For IEEE "Computer Journal," 1997 (Senior Reviewer)

For IFIP WG 2.4 Conference Systems Implementation 2000: Languages, Methods and Tools, Berlin, Germany, February 1998

For 4th International Conference on Mathematics for Program Construction MPS'98, Marstrand, Sweden, June 15-17, 1998

IEEE Transactions on Software Engineering 2003

Morgan Kaufman Publishers (book review) 2003

HAWAII INTERNATIONAL CONFERENCE ON SYSTEMS SCIENCES 2004

Journal of Visual Languages and Computing, Special Issue on Domain-Specific Modeling with Visual Languages 2003

MURI project report at Carnegie Mellon University CS Department, July 2003 (invited by ONR Program Director) 2003

I participated in the IEEE Software Engineering Standards Committee work by reviewing SE standard drafts.

Teaching and curriculum development.

At CS Department of Naval Postgraduate School I am teaching graduate courses CS3771 "C++ as a second language", CS2971 "Introduction in OO Programming", SW4500 "Introduction to Software Engineering", SW4150 "Software Environments and Tools", SW4938 "Research Seminar for Software Engineering Ph.D. students", SW4583 "Principles of Software Design", CS3113 "Compiler Construction".

During my tenure at NMSU, I've developed the core course on Software Development (CS371), graduate and undergraduate Compiler Construction courses (CS581 and CS370, respectively), and a course on systems programming with Ada (CS479/CS579. This course development was supported by a grant from the US Air Force). I am teaching classes at all undergraduate and graduate levels. My portfolio includes the following full semester (3 or 4 credit hours) courses: CS177 Programming in C++, CS272 Data Structures, CS370 Compilers and Automata,

CS371 Software Development, CS479/CS579 Systems Programming with Ada, and CS581 Compiler Construction, CS479/579 Program Verification and Validation. During this entire period, I have received very good student evaluations of my classes. For several years, I conducted a Research Seminar on Programming Tools and Environments for CS Department students and faculty. I have supervised many MS theses and projects, and pre-dissertation research.

1971-1992: At the Physics and Mathematics Department of University of Latvia as a part-time lecturer, I taught various courses on programming languages and software development. In particular: Programming in Assembly Language for IBM/360, Programming in PL/1, Programming in Pascal, Software Engineering, Formal Semantics Definition Methods for Programming Languages, Comparative Programming Languages (Pascal, LISP, APL, Simula-67, Prolog). In the 1970's I developed and established at Latvia University the first basic course on software engineering and actively participated in establishing the Computer Science program at Latvia University.

Graduate students supervised.

I supervised many Diploma projects and Theses at the Physics and Mathematics Department of Latvia University. At NMSU and NPS, I supervised the following CS MS student projects:

1994 MS Fang Lin, NMSU
1995 MS Miu Har Hon, NMSU
1996 MS David Siemers, NMSU
1996 MS Alfredo Delgado, NMSU
1996 MS Sridhar Bidigalu, NMSU
1997 MS Andy Flores-Mendoza, NMSU
1998 MS Pradeep Nandakumar, NMSU
1998 MS Ravindra Mathur, NMSU
2000 MS Irma Mendoza, NMSU
2001 MS Steven Carpenter, NPS
2002 MS Monjurul Islam, NMSU
2003 MS Daniel Turnas, NPS
2003 MS Saw Tee Huu, NPS
2004 MS Graham Pierson, NPS
2004 PhD, Co-adviser, Chris Williamson, NPS
2004 MS Chen Yuan Xin, NPS
2005 MS James Imanian, NPS
2005 MS Muharrem Aksu, NPS

I am/was on Ph.D. committees for Enrico Pontelli (NMSU, 1998), John Drummond (NPS, 2001), Richard Riehle (NPS, current), Bill Smuda (NPS, Advisor, current), Wei Zhao (UAB, current), Fei Cao (UAB, current), Ron Chen (NPS, current), Hui Wu (UAB, current), David Bibighaus (NPS, current)

List of publications.

Books and book chapters.

1. Auguston M., Balodis R., Barzdin J., Ikaunieks E., Kalnins A., Programming in the PL/1, Moscow, "Statistika," 1979, 270 pages (in Russian)

2. Auguston M., Balodis R., Barzdin J., Ikaunieks E., Ikauniece B., Kalnins A., Klimans L., Podnieks K., Programming in the PL/1, Moscow, "Finansy i Statistika," 1984, 2nd Edition, 327 pages (in Russian)

3. Auguston M.,Balodis R.,Barzdin J.,Ikaunieks E.,Ikauniece B.,Kalnins A.,Klimans L.,Podnieks K., Programowanie w jezyku PL/1 OS ES, Warszawa, PWN, 1988, 310 pages (in Polish)

4. Auguston M., "RIGAL - a Programming Language for Compiler Writing," in "Baltic Computer Science, Selected Papers," (eds. J.Barzdins, D. Bjorner), Lecture Notes in Computer Science, Springer Verlag, vol.502, 1991, pp.529-564

5. Auguston M., "Programming Language RIGAL," in Systems Informatics, vol.1, "Nauka," USSR Academy of Sciences, Novosibirsk, 1991, pp.76-120 (in Russian)

6. Raje, R. R., Olson, A. M., Bryant, B. R., Burt, C. C., Auguston, M., "UniFrame: A Unified Framework for Developing Service-Oriented, Component-Based Distributed Software Systems," Chapter 4 in Service-Oriented Software System Engineering: Challenges and Practices, eds. Z. Stojanovic, A. Dahanayake, Idea Group, Inc.,Hershey, PA, 2005, pp. 68-87, ISBN 159140427-4

7. Andrew M. Olson, Rajeev R. Raje, Barrett R. Bryant, Mikhail Auguston, Carol Burt, "A Process for Generating Software for Distributed, Heterogeneous Systems", (invited) in Parallel and Distributed Computing: Evaluation, Improvement and Applications (Eds: Y.S. Dai, Y. Pan, and R. Raje), Nova Science Publishers, 2005, (To Appear).

Refereed journal papers.

8. Auguston M., LEM - a Programming Tool for Data Processing, "Programmirovanije," no.1, 1978, pp.39-49 (in Russian). **English translation** in Programming and Computer Software (USA), vol.4, no.1, 1978, pp.25-31, Plenum Publishing Corporation

9. Auguston M., Programming Language RIGAL, "Programmirowanije," no.4, 1989, pp.31-42 (in Russian)

10. Peter Fritzson, Mikhail Auguston, Nahid Shahmehri, "Using Assertions in Declarative and Operational Models for Automated Debugging," Journal of Systems and Software, vol. 25(3), pp.223-232, June 1994

11. Mikhail Auguston, Peter Fritzson, "PARFORMAN - an Assertion Language for Specifying Behavior when Debugging Parallel Applications," International Journal of Software Engineering and Knowledge Engineering, vol.6, no.4, 1996, pp.609-640

12. M.Auguston, M.Koshelev, O. Kosheleva, "Even for Non-Point Events, Causality Implies the Lorenz Group," International Journal of Theoretical Physics, **37** (1998), no. 11, 2851--2856.

13. R.Raje, B.Bryant, A.Olson, M.Auguston, C.Burt, "A quality-of-service-based framework for creating distributed heterogeneous software components", in Concurrency and Computation: Practice and Experience, 2002, Vol. 14, No. 12, pp. 1009-1034.

14. C. Yang, B. R. Bryant, C. C. Burt, R. R. Raje, A. M. Olson, M. Auguston, "Formal Methods for Quality of Service Analysis in Component-Based Distributed Computing," *Journal of Integrated Design and Process Science 8*, 2 (June 2004), pp. 137-149.

15. Fei Cao, Barrett Bryant, Rajeev R. Raje, Andrew Olson, Mikhail Auguston, Wei Zhao, Carol Burt, "A Component Assembly Approach Based on Aspect-oriented Generative Domain Modeling", Electronic Notes in Theoretical Computer Science (ENTCS), Elsevier Science, Vol. 114, pp. 119-136, 2005.

16. Fei Cao, Barrett Bryant, Rajeev R. Raje, Andrew Olson, Mikhail Auguston, Wei Zhao, Carol Burt, "A Non-Invasive Approach to Assertive and Autonomous Dynamic Component Composition in Service-Oriented Paradigm", Journal of Universal Computer Science, (Invited – Under Review) 2005.

17. Fei Cao, Barrett R. Bryant, Wei Zhao, Carol C. Burt, Rajeev R. Raje, Andrew M. Olson, Mikhail Auguston, "Model-Driven Reengineering Legacy Software Systems to Web Services", International Journal of Information Technology and Web Engineering (Under Review), 2005.

18. M.Auguston, B.Michael, M.Shing, Environment Behavior Models for Automation of Testing and Assessment of System Safety, Information and Software technology, Elsevier, (under review), 2005

Refereed conference and workshop proceedings.

19. Auguston M., "Writing and Verifying Sequential Files Updating Programs," in Proceedings of 7th Symposium "Mathematical Foundations of Computer Science," Zakopane 1978, Lecture Notes in Computer Science, Springer Verlag, vol.64, 1978, pp. 102-111

20. Auguston M., "Programming Language RIGAL," in Proceedings of the Conference on Compilation Methods, Novosibirsk, 1988 (in Russian)

21. Barzdin J., Kalnins A., Auguston M., "SDL Tools for Rapid Prototyping and Testing," in SDL'89: The Language at work, (Ed. O.Faergemand, M.M.Marques), North Holland, 1989, pp.127-133

22. Auguston M., "FORMAN - Program Formal Annotation Language," in Proceedings of 5th Israel Conference on Computer Systems and Software Engineering, Herclia, May 27-28, IEEE Computer Society Press, 1991, pp.149-154

23. Peter Fritzson, Mikhail Auguston, Nahid Shahmehri, "Using Assertions in Declarative and Operational Models for Automated Debugging," in Proceedings of 5th International Conference on Software Engineering and Its Applications, Toulouse, France, December 7-11, 1992, IEEE Computer Society Press

24. Mikhail Auguston, Peter Fritzson, "PARFORMAN - an Assertion Language for Specifying Behavior When Debugging Parallel Applications," in Proceedings of Euromicro Workshop on Parallel and Distributed Processing, Gran Canaria, January 27-29, 1993. IEEE Computer Society Press

25. M.Auguston, "A Language for Debugging Automation," in Proceedings of 6th International Conference on Software Engineering and Knowledge Engineering, SEKE'94, Jurmala, June 22-24, 1994, pp.108-115

26. M.Auguston, V.Engelson, "The Programming Language RIGAL, a Tool for Compiler Writing," in Proceedings of Nordic Workshop on Programming Environment Research, Lund, June 1-3, 1994, pp.167-176

27. M.Auguston, J.Reinfelds, "A Visual Miranda Machine," in Proceedings of 5th International Conference on Software Engineering Education, Dunedin, New Zealand, November 21-23, 1994, pp. 198-203

28. M.Auguston, "Program Behavior Model Based on Event Grammar and Its Application for Debugging Automation," in Proceedings of 2nd International Workshop on Automated and Algorithmic Debugging, AADEBUG'95, Saint-Malo, France, May 22-24, 1995

29. Mikhail Auguston, Subhankar Banerjee, Manish Mamnani, Ghulam Nabi, Juris Reinfelds, Ugis Sarkans, Ivan Strnad, "AUI - the Debugger and Assertion Checker for the Awk Programming Language," in Proceedings of 2nd International Workshop on Automated and Algorithmic Debugging, AADEBUG'95, Saint-Malo, France, May 22-24, 1995

30. M.Auguston, "Programming Language RIGAL as a Compiler Writing Tool," in Proceedings of 7th International Conference on Software Engineering and Knowledge Engineering, SEKE'95, Rockville, MD, USA, June 22-24, 1995, pp.500

31. Mikhail Auguston, Subhankar Banerjee, Manish Mamnani, Ghulam Nabi, Juris Reinfelds, Ugis Sarkans, Ivan Strnad, "A Debugger and Assertion Checker for the Awk Programming Language," in Proceedings of 1996 International Conference on Software Engineering: Education and Practice, Dunedin, New Zealand, January 1996, pp.242-249

32. M.Auguston, A.Delgado, "The V Experimental Visual Programming Language," in Proceedings of NASA URC Technical Conference, vol.1, Albuquerque, NM, February 1997, pp.81-89

33. M.Auguston, Miu Har Hon, "Assertions for Dynamic Shape Analysis of List Data Structures," in Proceedings of 3rd International Workshop on Automated and Algorithmic Debugging, AADEBUG'97, Linkoping, Sweden, May 1997, pp.37-42; Proceedings of AADEBUG'97 also available as Linkoping Electronic Articles in Computer and Information Sciences at http://www.ep.liu.se/ea/cis/1997/009/

34. M.Auguston, "Visual Data Flow Language Based on Iterative Constructs," in Proceedings of 8th Israeli Conference on Computer Systems and Software Engineering, Herzliya, Israel, June 1997, IEEE Computer Society Press, pp.91-100

35. M.Auguston, A.Gates, M.Lujan, "Defining a Program Behavior Model for Dynamic Analyzers," Proceedings of the 9th International Conference on Software Engineering and Knowledge Engineering, SEKE'97, Madrid, Spain, June 1997, pp.257-262

36. M.Auguston, A.Delgado, "Iterative Constructs in the Visual Data Flow Language," Proceedings of IEEE Symposium on Visual Languages VL97, Capri, Italy, September 1997, IEEE Computer Society, pp.152-159

37. M. Auguston, "Building Program Behavior Models," in Proceedings of European Conference on Artificial Intelligence ECAI-98, Workshop on Spatial and Temporal Reasoning, Brighton, England, August 23-28, 1998

38. M.Auguston, "Lightweight Semantics Models for Program Testing and Debugging Automation," in Proceedings of 7th Monterey Workshop: Modeling Software System Structures in a Fastly Moving Scenario, Santa Margherita Ligure, Italy, June 13-16, 2000, pp.23-31, on-line proceedings at http://www.disi.unige.it/person/ReggioG/PROCEEDINGS/

39. M.Auguston, "Tools for Program Dynamic Analysis, Testing, and Debugging Based on Event Grammars," in Proceedings of 12th International Conference on Software Engineering and Knowledge Engineering, Chicago, Illinois, July 6-8, 2000, pp.159-166

40. M.Auguston, Assertion Checker for the C Programming Language based on Computations over event traces, in Proceedings of the Fourth International Workshop on Algorithmic and Automatic Debugging, AADEBUG'2000, Munich, Germany, August 28-30, 2000, pp.90-99 on-line proceedings at http://www.irisa.fr/lande/ducasse/aadebug2000/proceedings.html

41. V.Berzins, M.Auguston, Luqi, "Generating Test Cases for System Generators", in Proceedings of the Conference on Dynamic and Complex System Architecture, Brisbane, Australia, December 2001.

42. Luqi, V. Berzins, J. Ge, M. Shing, M. Auguston, B. Bryant, B. Kin, "DCAPS - Architecture for Distributed Computer Aided Prototyping System", in Proceedings of the 12th IEEE International Workshop on Rapid System prototyping, pp.103-109, June 25-27, 2001, Monterey Beach Resort, California, USA, IEEE Computer Society Press, 2001

43. M.Auguston, "Visual Meta-programming Notation", in Proceedings of the 2001 Monterey Workshop "Engineering Automation for Software Intensive System Integration", (Sponsored by DARPA, ONR, ARO, and AFOSR), pp.128-139, Monterey, California, 2001

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